

**Independent Expert Scientific Committee on Coal Seam Gas and
Large Coal Mining Development (IESC)
Minutes – Meeting 20, 12-13 August 2014**

**MINUTES – Meeting 20
Old Parliament House, Canberra ACT**

Attendance and Apologies

IN ATTENDANCE

Ms Lisa Corbyn (Chair)
Professor Craig Simmons (Deputy Chair)
Emeritus Professor Angela Arthington
Ms Jane Coram
Emeritus Professor Peter Flood
Dr Andrew Johnson (by teleconference)
Mr Jim McDonald
Professor Dayanthi Nugegoda

APOLOGIES

Nil

OFFICE OF WATER SCIENCE (OWS) - SECRETARIAT AND SUPPORT

Gayle Milnes
Sean Lane
Kimberley Hammond
Helen Vooren

OTHER STAFF OF THE DEPARTMENT OF THE ENVIRONMENT

Edwina Johnson (Item 3) Office of Water Science	Scott Lawson (Item 2) Office of Water Science
Mark Say (Item 2) Office of Water Science	Craig Moore (Item 2) Office of Water Science
Anthony Swirepik (Item 4) Office of Water Science	Mitchell Bouma (Item 2) Office of Water Science
Geraldine Cusack (Item 3) Office of Water Science	Emily Turner (Item 2) Office of Water Science
Kim Bennett (Item 2) Office of Water Science	Ben Roudnew (Item 2) Office of Water Science
Sophie Alexander (Item 5) Office of Water Science	Crystal Bradley (Item 5) Office of Water Science
Shane Hogan (Item 4) Office of Water Science	Rod Dann (Item 2) Office of Water Science
Peter Baker (Items 2 and 3) Office of Water Science	

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The meeting commenced at 9.00 am on 12 August 2014.

1. Welcome and Introductions

The Chair, Lisa Corbyn, welcomed members of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) to the meeting.

There were no apologies.

1.1 Acknowledgement of country

The Chair acknowledged the traditional owners, past and present, on whose land this meeting was held.

1.2 Declaration of interest

Before the meeting commenced, IESC members completed the Meeting Specific Declaration of Interest. The determinations recorded at this meeting are available at *Attachment A*.

Prior to the meeting, Dr Johnson and the Chair discussed the two NSW projects (Angus Place and Springvale) to be considered at Item 2, as CSIRO undertook the groundwater modelling on these projects. Dr Johnson was not involved in the modelling and does not have responsibility or oversight of the Division that conducted the work. As a result the Chair determined that he does not have a conflict of interest. However to ensure that there would be no perception of a conflict, Dr Johnson did not participate in the Committee's discussion on and consideration of the finalisation of the advice on these projects.

For information and noting, the Chair advised, regarding Item 2, that she had previously been the Director General of the NSW Environment Protection Authority which regulates mines being considered as projects, the Director General of the NSW Parks and Wildlife Services responsible for Gardens of Stone National Park and the Chief Executive Officer of the Sydney Catchment Authority. She undertakes no work for these agencies and has had no association with them for well over 2 years. It was determined that no conflict existed due to the lack of current involvement with those agencies and the length of time since Ms Corbyn's association with these agencies.

1.3 Confirmation of agenda

The IESC endorsed the agenda for Meeting 20, agreeing to changes allowing the meeting to be completed in two days.

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1.4 Action items

Completed items were noted. A number of follow-up items were listed on the agenda for this or later meetings.

1.5 Confirmation of out-of-session decisions

The Chair noted the following out-of-session items:

- Minutes of the IESC's nineteenth meeting (15-16 July 2014) were agreed out-of-session and posted on the IESC's website.

1.6 Correspondence

The IESC noted the action taken and the status of correspondence to 28 July 2014.

1.7 Environmental scan

The Office of Water Science (OWS) provided an update on developments since the July IESC meeting, including the additional Environment Protection and Biodiversity Conservation Regulations that came into effect on 26 July and the proposed *EPBC Amendment (Bilateral Agreement Implementation) Bill 2014* before the Senate. IESC members were informed of the Chair's meeting with the NSW Farmers' Association President, Ms Fiona Simpson, on 30 July 2014.

1.8 Forward Planning Agenda

The IESC noted the forward planning agenda and items due for consideration through to December 2014.

2. Advice on Projects referred by Governments

2.1 South Galilee Coal Project, Qld

The Australian Government Department of the Environment and the Queensland Office of the Coordinator General, Department of State Development, Infrastructure and Planning sought the IESC's advice on South Galilee Coal Project which is at the assessment stage. The Interim IESC previously provided advice to the Australian Government regulator on the Environmental Impact Statement for the proposed project in June 2012.

The proposed project is a new open cut and underground coal mining operation. It is located in the Galilee Basin in Central Queensland, approximately 12 kilometres south-west of Alpha and 170 kilometres west of Emerald. The mine is proposed within the upper catchment area of the Burdekin River Basin. It is expected that the mine output will average 13.8 million tonnes per annum of run-of-mine coal for up to 35 years.

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Matters of interest to the IESC included:

- the numerical groundwater model, its relationship to the groundwater conceptualisation, and sensitivity/uncertainty analyses;
- potential groundwater drawdown and depleted groundwater flow in the Clematis Sandstone, with potential impacts on Great Artesian Basin springs;
- releases of mine water from the site into the environment; and
- increased connectivity between coal seams and overlying layers as a result of subsidence.

Consistent with the new Regulations of the EPBC Act, the IESC's advice on this project will be published on the IESC's website within 10 business days of its provision to the Department of the Environment and the Office of the Coordinator-General.

2.2 Springvale and Angus Place Mine Extensions, NSW

Joint requests for advice were received from the Australian Government Department of the Environment and the NSW Department of Planning and Environment on two mine extension proposals for neighbouring mines (Springvale and Angus Place) located in the Western Coalfields of the Sydney Sedimentary Basin. The Interim IESC previously provided advice to the Australian Government regulator on two extensions at these mines in February 2012. As noted in the joint request these two applications need to be considered concurrently as the existing mining areas are generally adjacent, the proposed mining areas would impact on similar water resources. As requested by the regulators, separate pieces of advice were prepared for each project.

The projects are located within the Coxs River catchment, part of the water supply catchment for Sydney, 15 kilometres north west of Lithgow and 120 kilometres west of Sydney. They are bordered by the Newnes State Forest (east) and the Gardens of Stone National Park (north). Both mines are operated by subsidiaries of Centennial Coal Limited, and are currently at the assessment stage.

The Angus Place Mine Extension Project is planned to comprise 21 new longwall panels and would allow for ongoing production of 4 million tonnes per annum of run-of-mine coal for up to 25 years.

The Springvale Mine Extension Project is planned to comprise 20 new longwall panels, and would allow for ongoing production of 4.5 million tonnes per annum of run-of-mine coal for up to 13 years.

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Matters of interest to the IESC for both projects included:

- the influence of structural lineaments (deep underlying faults) on subsidence related impacts and groundwater flow;
- the risk of severe and potentially irreparable subsidence related impacts to listed endangered ecological communities known as Temperate Highland Peat Swamps on Sandstone (THPSS);
- the effectiveness and confidence in mitigation and remediation measures relating to peat swamps;
- groundwater modelling and the predicted impacts on the THPSS; and
- contaminants that pose a risk to the surface water quality of Coxs River situated within the Warragamba Dam catchment.

Consistent with the new Regulations of the EPBC Act, the IESC's advice on these projects will be published on the IESC's website within 10 business days of their provision to the Department of the Environment and the NSW Department of Planning and Environment.

2.3 Development of theme sheet: flood management

The IESC noted and endorsed the proposed approach to the theme sheet. The OWS was requested to bring forward a draft to the September meeting.

3. Bioregional Assessments

3.1 Bioregional Assessments progress

An update was provided on key scientific matters that have arisen from undertaking the bioregional assessments including:

- the development of coal resource development pathway for the Gloucester subregion;
- the challenge of incorporating the impacts of cumulative subsidence on water resources in areas where there are numerous, large-scale underground mining developments proposed in close proximity to each other;
- the first draft data register for the Clarence-Moreton bioregion and the ongoing form of the product as the Information Platform is developed;
- the schedule for developing sub-methodologies; and
- stakeholder engagement activities that are planned or have been undertaken since the last IESC meeting.

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The IESC provided advice on the summary risk assessment and treatment, the data register, the schedule for future consideration of sub-methodologies and the importance of gaining an understanding of and being able to respond to stakeholder expectations.

3.2 Bioregional Assessment approach to climate variability

Dr Brent Henderson, Science Director for the Bioregional Assessment Programme, CSIRO and other members of the Bioregional Assessment Programme presented to the IESC on strategies to incorporate climate variability into the work. It was noted that the Bioregional Assessment Programme is not a climate change study and the primary aim is to compare existing conditions to the conditions with the most likely development pathway. The IESC provided support for the proposed approach and provided scientific advice on issues including the use of appropriate global climate models, the importance of sensitivity analysis and uncertainty analyses and sourcing the best science (including from other experts) in developing these analyses.

The Chair thanked Dr Henderson and the other attendees for sharing their insights and requested that the IESC be kept informed of progress of this work.

4. Research

4.1 Update on Research

Key developments on research were reported to and discussed by the IESC including:

- the imminent publication of three Peat Swamps reports (Peat swamp ecological characteristics, sensitivities to change and recommendations for monitoring and reporting regimes: Longwall mining engineering design – subsidence prediction, buffer distances and mine design options; and an evaluation of mitigation and remediation techniques for peat swamps impacted by longwall mining);
- new projects in the hydrology theme;
- the subsidence background review and fact sheet; and
- a survey by CSIRO to gauge the need for possible future chemicals work.

The IESC highlighted the importance of the publication of the Peat Swamps reports and provided advice on the chemical research to be discussed under item 4.2

Outcomes from the Ecology Workshop

The expert workshop for the Modelling water-related ecological responses to coal seam gas extraction and coal mining project was held in Queensland on 21-25 July 2014. The IESC was advised that attendees provided input to differentiating between natural drivers and non-mining stressors and those associated with CSG and coal mining activities. The workshop attendees, which included IESC's Angela Arthington, identified

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specific research questions under four sub-themes addressing the broad knowledge gaps previously identified by the IESC. The IESC provided advice on the possible spin-offs on this research and noted that the scope for an integrated package of research will be provided at the October IESC meeting with a technical report on the project provided to the November meeting.

4.2 National Assessment of Chemicals Associated with Coal Seam Gas Extraction in Australia: summary of Human Health Risk Assessment

Dr Sneha Satya, Head of the Targeted Assessment Programme, National Industrial Chemicals Notification and Assessment Scheme (NICNAS) presented on the Public and Worker Health Risk Assessment undertaken as part of the series of work being completed for the National Assessment of Chemicals Associated with Coal Seam Gas (CSG) Extraction. The assessment processes being used were outlined, which underscored the importance of a peer review of the findings by appropriately qualified experts. The IESC provided comments on the importance of liaising with the regulators, and the timetable for the full project as well as the timing of individual products and reinforced the need for an overarching communication strategy to effectively communicate the findings of this research.

The Chair complimented and thanked Dr Satya for her presentation.

5. Strategic Discussions

5.1 IESC Communication and Stakeholder Liaison Strategy

The IESC Communication and Stakeholder Liaison Strategy was endorsed by the IESC.

5.2 Presentation – One Stop Shop

Ms Tanja Cvjanovic, Assistant Secretary, Regulatory Reform Taskforce, Department of the Environment provided the IESC with a presentation on the reforms to the *Environment Protection and Biodiversity Conservation Act 1999*, known as the One-Stop Shop for environmental approvals, including the proposed amendments to the EPBC Act currently before the Senate, and recent amendments to the Regulations.

The Chair thanked Ms Cvjanovic for her presentation and requested that the OWS report to the September meeting on any changes required to the IESC's operating protocols to ensure compliance with the new legislative framework.

5.3 Feedback Session

The IESC provided feedback on the support services provided by the OWS, to ensure these continued to meet the IESC's requirements.

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5.4 IESC 2015 Meeting schedule

The IESC agreed to the proposed meeting schedule for 2015, which allows for ten meetings with a fixed five week meeting cycle and includes a field trip in August or September.

Close of Meeting

The Chair thanked everyone for their contribution to the meeting.

Next Meeting

The next meeting is scheduled for 9-11 September 2014 in Canberra.

The meeting closed at 5.00 pm 13 August 2014.

Minutes confirmed as true and correct:

Ms Lisa Corbyn
IESC Chair

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Item(s)	IESC member	Disclosure	Determination
2	Lisa Corbyn	I do not consider there to be any actual, potential or perceived conflict of interest that would preclude me from fully participating in this meeting or properly performing my duties as a member of the committee. For the record, I note that I was previously the Director General of the Environment Protection Authority which regulates mines being considered as projects, the Director General of the NSW Parkes and Wildlife Services responsible for Gardens of Stone National Park and Chief Executive Officer of the Sydney Catchment Authority. I am not involved with any of these agencies now nor have I been for over 2 ½ years.	No actual, potential or perceived conflict of interest exists and Ms Corbyn participated fully in the IESC meeting. The reason for the decision is the lack of current association with former agencies and the length of time elapsed since Ms Corbyn's involvement with the NSW agencies identified.
2	Dr Andrew Johnson	I consider that there may be a possible conflict of interest in relation to agenda item 2.2.1 and 2.2.2. This arises from CSIRO undertook the modelling on the Angus Place and Springvale se projects	Dr Johnson advised he was not involved in the modelling and does not have a conflict. However to ensure that there would be no perception of a conflict, Dr Johnson agreed and did not participate in the Committee's discussion of and consideration of the finalisation of the advice to the referral agencies on the two NSW projects.
3, 4	Ms Jane Coram	I consider that there may be a possible conflict of interest in relation to agenda items 3 and 4 arising from <i>Geoscience Australia's involvement in bioregional assessments and Geoscience Australia's potential interest in undertaking the research activities.</i>	No actual, potential or perceived conflict of interest exists and Ms Coram participated fully in the IESC meeting. The reason for the decision is that the IESC is not making decisions on funding of research and therefore there is not conflict in relation to this meeting.
4	Professor Craig Simmons	I consider that there may be a possible conflict of interest in relation to agenda item 4 (Research) arising from <i>National Centre</i>	No actual, potential or perceived conflict of interest exists and Professor Simmons

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		<i>for Groundwater Research and Training (NCGRT) being a potential provider of R&D to the IESC/OWS.</i>	participated fully in the IESC meeting. The reason for the decision is that the IESC is not making decisions on research funding therefore there is no conflict in relation to the meeting.
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